Efficiency of Ukraine’s monetary policy in the context of achieving monetary security

Abstract. The article explores the effectiveness of monetary policy by identifying its main criteria and analyzing indicators of monetary security. The authors draw conclusions about the state of monetary policy and its impact on Ukraine’s economic security. The analysis indicates that the country’s monetary policy is sufficiently effective to achieve the monetary goals and guarantee economic security. Four groups of monetary threats to economic security were identified, related to monetary policy, banking, investment and institutional environment, which were rated on a scale from 0 to 5 for 2010, 2015 and 2020. At the beginning of 2020 Ukraine’s economic security was mainly threatened by excessive dollarization of the economy and a small share of long-term loans in all total loans granted by banks. The authors argue that effective monetary policy at the present stage should focus on stabilizing, modernizing and restructuring the industry.

Keywords: monetary policy, monetary security, economic security, efficiency, indicators, monetary threats

1. Introduction

The processes of globalization and objective multi-faceted nature of modern financial relations keep developing new threats and risks, ignoring of which
leads to the development of crisis phenomena and makes analytical tools of the monetary policy inadequate in the rapidly changing conditions of reality. As the results, the fundamentals of the monetary policy in the national economy also require additional reconsideration for the sake of ensuring protection of the national interests and sustainable state development for the long run. Economic security of the state is becoming one of the key problems requiring permanent promotion along all the directions it includes, in particular, in the monetary field.

Since the period of economic reforms, the monetary policy in Ukraine has been developed and implemented only with due account of the monetary reference points and targets. The monetary mechanism was not adjusted to economic problem solving, which fact was confirmed by the financial crises of the 2008-2009 and 2015-2016. Monetary tools were directed at ensuring price stability and slowing down the pace of inflation, leaving out the need for boosting economic growth in the state. Price stability has become a favourable environment for economic growth, but not its factor. It is important of ensure achievement of sustainable economic growth via quality changes in the economy, and not just via short-term quantitative growth indicators to the detriment of long-term development.

The consequences of financial crises for the national economy have shown that implementation of the monetary policy over the previous periods posed a threat for the macroeconomic stability and sustainability of long-term development. All this has caused the need for assessing the efficiency of the monetary policy at the current stage of the national economy development in the context of ensuring economic security of the state.

It should be indicated that the regulatory documents of the National Bank of Ukraine (NBU) do not contain any definition of the notion ‘efficiency of the monetary policy, that is why opinions of scientists concerning the interpretation of this notion differ.

Thus, Serhiy Tsyhanov [2007] defines the efficiency of the monetary policy via the balance of money demand and supply as the key condition for the stability of the national currency. Svitlana Naumenkova [2017] shares his opinion, indicting that ‘development of an efficient monetary policy causes the need for detailed consideration of the issues of balancing the demand for and supply of the monetary stock with actual activities aimed at ensuring financial stabilization and economy stimulation’.

Scientists Olha Bespalova and Tatyana Ilyina [2014] assess the efficiency of the monetary policy through empirical assessment of efficiency of the effect of the transmission (transfer) mechanism of the monetary policy in the cross-section of its main channels (the chains of interrelated macroeconomic variables) – inter-
est, currency channel, prices of assets, expectations of market entities, monetary channel, etc.

In the opinion of Volodymyr Pradun [2018], the monetary policy shall be acknowledged as efficient if the economy does not have any booms and declines, is characterized by sustainable development and predictability of the situation in the money markets.

Thus, in the context of the research, efficiency of the monetary policy shall be considered as the result of minimizing monetary threats to the state’s economic security.

2. Core material

The criteria of the monetary policy efficiency. The criteria of the monetary policy efficiency are set annually in the Fundamental Principles of the Monetary Policy, approved by the Resolution of the Management Board of the National Bank of Ukraine.

In 2010 the main goal of the monetary policy was to achieve ‘monetary unit sustainability, which constitutes the foundation for ensuring well-balanced economic development, raising the employment rate and real income of residents [Osnovni zasady hroshovo-kredytnoi polityky na 2010 rik].

In 2014 the key criterion of the monetary policy was maintenance of low stable inflation rate in the mid-term (from 3 to 5 years). The NBU’s effort was directed at maintaining the consumer price index (CPI) growth within the limits not exceeding the value forecasted by the Government – 19%. In the mid-run the NBU will strive to achieve and maintain the consumer price index within 3-5%.

The priority goal of the monetary policy in 2015 was also achievement and maintenance of the price stability in the state via ensuring low stable inflation pace in the mid-term (from 3 to 5 years), as measured by the consumer price index within 3-5% a year. [Osnovni zasady hroshovo-kredytnoi polityky na 2015 rik].

The main principles of the monetary policy for 2016-2020 followed the tradition of the previous years, and again achievement of the ‘price stability via compliance with the quantitative goals for inflation’, promotion of the ‘financial stability and keeping with the stable rate of economic growth and support of the economic policy of the Government of Ukraine on condition this would not prevent from achievement of the inflation goals’ was set as the priority goal for the National Bank of Ukraine [Pro Osnovni zasady hroshovo-kredytnoi polityky na 2016-2020 roky].
That means that over the period under research there can be traced an absolute priority of achievement and maintenance of the price stability as the critical goal of the NBU’s monetary policy, as compared with other goals and tasks. At the same time, this NBU’s goal is only partially related to ensuring economic growth in the state and is absolutely not related to the issue of financial and/or economic security. Therefore, while researching the efficiency of the monetary policy in terms of ensuring economic security of the state we will use the following criteria [Vlasyuk 2008]:

- sustainability of the monetary field, that is its ability to fulfill its tasks and perform its functions in a full-fledged way in the conditions of availability and impact of external and internal threats;
- independence of the state policy in the monetary field, that is the ability to independently determine and secure achievement of strategic and tactical objectives of the monetary regulation;
- ability of the monetary system to develop for the sake of ensuring sustainable economic development of the state.

The importance of the monetary policy for ensuring financial security, and economic security via it, lies in the fact that it affects the real purchasing power of the national monetary unit and the stability of the money turnover, which ensure stable conditions for production recovery.

The choice of the most efficient monetary policy within the framework of ensuring financial security at the current stage lies in the development of the conditions for sustainable development of the financial system and ensuring economic growth through inflation impact limitation. Traditional monetary policy that used to be efficient in the period of separation of national economies is not efficient now. The state can no longer regulate and control the cross-border capital flow. Besides that, prevention of a repeated global financial crisis requires implementation of new methodological approaches to the monetary policy, improvement of its tools and mechanisms.

**Analysis of the monetary security level indicators.** In the development of the long-term economic development strategy based on security principles it is important to determine certain indicators of the monetary security level. We suggest the list of such indicators, with determined threshold values and the characteristics of possible threats posed by deviations of the actual values of those indicators from their threshold values (Table 1).

Thus, as it can be seen from Table 1, the list of indicators of the state monetary security level assessment is rather long, this enabling the NBU to assess the efficiency of the monetary policy in dynamics.

The most important indicator by which the efficiency of the monetary policy and achievement of the NBU’s objectives are assessed is inflation rate. Using this indicator the level of securing internal financial stability in the state is also
determined. That is why the goal of central banks is to follow inflation reference points which are normally set as the general goals of the monetary policy that could be easily measured.

The threshold value of the inflation rate is inflation up to 10% a year (creeping inflation), according to the current inflation targets of the National Bank of

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator name</th>
<th>Threshold value</th>
<th>Possible threat of deviation of the actual figure from the threshold value</th>
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<tbody>
<tr>
<td>1.</td>
<td>Economy monetization, M2/GDP</td>
<td>40-50%</td>
<td>Low level of monetization can lead to reduced consumer and investment demand, limited economic growth.</td>
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<tr>
<td>2.</td>
<td>The scope of international (gold and foreign currency) reserves</td>
<td>The volume of 3-month import</td>
<td>Insufficient volume of gold and foreign currency reserves limits the opportunities of the NBU ensure monetary unit sustainability.</td>
</tr>
<tr>
<td>3.</td>
<td>Inflation rate</td>
<td>up to 10% a year (creeping inflation)</td>
<td>Inflation reduction by all means can lead to the credit liquidity crisis and final demand restriction.</td>
</tr>
<tr>
<td>4.</td>
<td>Economy dollarization rate</td>
<td>20%</td>
<td>Excessive dollarization testifies to the growing lack of residents’ trust in the national money, dependence of the state economy on the fluctuations in the foreign currency exchange rate, in particular, that of the US dollar; makes the influence of the NBU on the money supply in the economy worse, this making it more difficult to influence stability of the national money.</td>
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<tr>
<td>5.</td>
<td>Velocity of money</td>
<td>2</td>
<td>Indicator growth points to the unwillingness of residents to save, which is a proof of instability in the economy. Considerable slowing down of the velocity of money stands for the seizure of money from circulation by residents, their unwillingness to spend it, that may urge additional money emission.</td>
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<tr>
<td>6.</td>
<td>Cash scope, % to the monetary supply</td>
<td>no more than 10</td>
<td>Considerable scope of cash in circulation points to the imperfect nature of the banking system and money circulation, proves the lack of trust in the banking system, creates favourable conditions for the shadow economy functioning.</td>
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<tr>
<td>7.</td>
<td>The share of long-term credits in the general scope of credits provided by banks for the economy, %</td>
<td>no less than 30%</td>
<td>The value of the indicator being lower than the threshold one points to the availability of high credit risks of long-term crediting both for creditors and for borrowers. That leads to reduced investment into the state economy, thus impeding economic growth.</td>
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Source: own authors’ development.
Ukraine which it has been trying to follow since 2017 – the period of implementation of inflation targeting as the monetary regime in Ukraine.

Experience has shown that maintenance of moderate inflation in the long-run develops the overall sense of macroeconomic stability and predictability with economic agents, this shaping up solid foundation for sustainable economic development.

Table 2 represents the core indicators of the monetary security level.

Having analyzed inflation indices over 2010-2020, we have established that this indicator went beyond the threshold value, thus creating a threat for the financial and economic security of Ukraine in 2014-2017 (124.9%; 143.3%; 112.4%; 113.7%, respectively? in those years), when the state was faced with the financial and economic crisis caused by political instability and full-swing military operations in the south and east of the country.

That means that external factors in that period provoked inflation growth that caused destabilization of the status of the financial system and posed a threat for the state economic system in general, this manifesting in the following:

– reduced rate of real resident income growth;
– increased cost of credit resources;
– reduced scope of economic agents’ savings;
– loss of state price competitive positions in the domestic and external markets;
– imbalance in the monetary and commodity markets, this leading to appearance of many accounts receivable and accounts payable, etc.

In other years of the period under research the inflation rate corresponded to the set threshold value (up to 10% a year) and was kept by the NBU within creeping inflation, this posing no threat for the financial and price stability in the state.

Inflation maintenance within the inflation targets set by the NBU over the recent years testifies to the achievement of the price goals of the monetary policy and to its efficiency.

An important tool of the Central Bank’s monetary policy for regulating currency exchange rate is management of gold and foreign currency (international) reserves which should be available in sufficient amounts to prevent rapid devaluation or revaluation of the national monetary unit.

As it has been shown in Table 1, the threshold value of the volume of international reserves equals the volume of 3-month state import. As of the beginning of 2020 finally the most efficient value of the volume of gold and foreign currency reserves was achieved in the amount of 26.29 billion USD, that could cover 4-month import of Ukraine, this enabling to overcome the critical threat posed by this indicator to the state’s economic security.

High level of threat posed by gold and foreign currency reserves was in place since the beginning of 2014 since the volume of reserves, as the result of
Table 2. The main indicators of the level of impact of the monetary policy on economic security

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<tr>
<td><strong>The indicators of the NBU’s monetary statistics</strong></td>
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<tr>
<td>Gross domestic product (GDP), bln. UAH</td>
<td>913.35</td>
<td>1,082.57</td>
<td>1,316.60</td>
<td>1,408.89</td>
<td>1,454.93</td>
<td>1,566.73</td>
<td>1,979.46</td>
<td>2,383.18</td>
<td>2,982.92</td>
<td>3,558.71</td>
<td>3,974.56</td>
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<tr>
<td>Inflation index, % (a year)</td>
<td>109.1</td>
<td>104.6</td>
<td>99.8</td>
<td>100.5</td>
<td>124.9</td>
<td>143.3</td>
<td>112.4</td>
<td>113.7</td>
<td>109.8</td>
<td>104.1</td>
<td>105.0</td>
</tr>
<tr>
<td>M3, mln. UAH</td>
<td>487.30</td>
<td>597.87</td>
<td>685.51</td>
<td>773.20</td>
<td>909.0</td>
<td>956.7</td>
<td>994.1</td>
<td>1,102.7</td>
<td>1,208.9</td>
<td>1,277.6</td>
<td>1,438.3</td>
</tr>
<tr>
<td>M0 mln. UAH</td>
<td>157.03</td>
<td>182.99</td>
<td>192.66</td>
<td>203.25</td>
<td>237.8</td>
<td>282.7</td>
<td>314.4</td>
<td>332.5</td>
<td>363.6</td>
<td>384.4</td>
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<tr>
<td>M1 mln. UAH</td>
<td>233.75</td>
<td>289.89</td>
<td>311.05</td>
<td>323.23</td>
<td>383.5</td>
<td>472.2</td>
<td>529.9</td>
<td>601.6</td>
<td>671.3</td>
<td>770.0</td>
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<tr>
<td>M2 mln. UAH</td>
<td>484.77</td>
<td>596.84</td>
<td>681.80</td>
<td>771.13</td>
<td>906.2</td>
<td>955.3</td>
<td>993.8</td>
<td>1,028.6</td>
<td>1,208.6</td>
<td>1,273.8</td>
<td>1,435.2</td>
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<tr>
<td>The volume of bank credits provided to the economy, bln. UAH</td>
<td>723.30</td>
<td>732.82</td>
<td>801.81</td>
<td>815.14</td>
<td>910.78</td>
<td>1,020.67</td>
<td>981.63</td>
<td>998.68</td>
<td>1,016.657</td>
<td>1,073.13</td>
<td>971.87</td>
</tr>
<tr>
<td>The volume of NBU’s international reserves, bln. USD</td>
<td>25.29</td>
<td>35.14</td>
<td>31.36</td>
<td>24.65</td>
<td>17.81</td>
<td>13.44</td>
<td>15.44</td>
<td>18.58</td>
<td>20.82</td>
<td>26.29</td>
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<td><strong>Estimate indicators</strong></td>
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<tr>
<td>Money supply growth rate as compared with the previous year</td>
<td>–</td>
<td>1.23</td>
<td>1.15</td>
<td>1.13</td>
<td>1.18</td>
<td>1.05</td>
<td>1.04</td>
<td>1.11</td>
<td>1.10</td>
<td>1.06</td>
<td>1.13</td>
</tr>
<tr>
<td>Monetization rate (M2 / GDP), %</td>
<td>53</td>
<td>55</td>
<td>52</td>
<td>55</td>
<td>62</td>
<td>61</td>
<td>50</td>
<td>46</td>
<td>41</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Circulation velocity (GDP / M2)</td>
<td>1.88</td>
<td>1.81</td>
<td>1.93</td>
<td>1.83</td>
<td>1.61</td>
<td>1.64</td>
<td>1.99</td>
<td>2.16</td>
<td>2.47</td>
<td>2.79</td>
<td>2.77</td>
</tr>
<tr>
<td>Cash volume (M0 / M3), %</td>
<td>32</td>
<td>31</td>
<td>28</td>
<td>26</td>
<td>26</td>
<td>30</td>
<td>29</td>
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<td>27</td>
</tr>
<tr>
<td>The share of long-term credits in the overall scope of credits provided by banks for the economy, %</td>
<td>31</td>
<td>29</td>
<td>25</td>
<td>22</td>
<td>19</td>
<td>21</td>
<td>22</td>
<td>26</td>
<td>26</td>
<td>23</td>
<td>20</td>
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<tr>
<td>Economy crediting rate, %</td>
<td>79</td>
<td>68</td>
<td>61</td>
<td>58</td>
<td>63</td>
<td>65</td>
<td>50</td>
<td>42</td>
<td>34</td>
<td>30</td>
<td>24</td>
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<tr>
<td>The difference between interest rates for credits and deposits in the national currency for non-financial corporations, in p.</td>
<td>8.2</td>
<td>9.1</td>
<td>5.4</td>
<td>6.3</td>
<td>8.9</td>
<td>10.1</td>
<td>6.8</td>
<td>7.0</td>
<td>6.3</td>
<td>5.4</td>
<td>5.8</td>
</tr>
<tr>
<td>Credit dollarization rate, %</td>
<td>46.03</td>
<td>40.31</td>
<td>36.75</td>
<td>33.82</td>
<td>44.33</td>
<td>55.8</td>
<td>49.4</td>
<td>43.9</td>
<td>42.8</td>
<td>36.9</td>
<td>38.2</td>
</tr>
<tr>
<td>Residents’ deposit dollarization rate, %</td>
<td>42.57</td>
<td>42.97</td>
<td>44.04</td>
<td>37.05</td>
<td>41.37</td>
<td>45.3</td>
<td>46.26</td>
<td>45.38</td>
<td>42.05</td>
<td>41.66</td>
<td>41.4</td>
</tr>
</tbody>
</table>

Source: calculated on the basis of [Indeks inflatsii. Ministerstvo finansiv Ukrainy; Depozyty, zalucheni depozytnymy korporatsiyami (krim Natsionalnoho banku Ukrainy); Kredyty, nadani depozytnymy korporatsiyami (krim Natsionalnoho banku Ukrainy), Natsionalnyi bank Ukrainy; Hroshovo-kredytna ta finansova statystyka, 2019, Natsionalnyi bank Ukrainy; Nominalnyi VVP Ukrainy z 2002 po 2020 rr.].
monetary instability and limited credit facilities revenue from the International Monetary Fund (IMF) went down to 17.81 bln. USD in 2019 (as of the early 2013 – 24.65 bln. USD).

Taking into account permanent replenishment of the gold and foreign currency reserves by the NBU over the whole 2020, it may be considered that the threat posed by that indicator has been eliminated, while the NBU has got a full-fledged efficient tool for ensuring and regulating stability in the currency market and for preventing further hryvnia devaluation.

The impact of the amount of money supply, characterizing all the monetary assets being at the disposal of natural persons and legal entities, on the level of financial security of any state is undeniable.

The structure of money supply reflects the level of development of the country’s economy and develops out of the monetary aggregates М0; М1; М2, and М3 on the basis of which a number of analytical indicators for the assessment of the efficiency of the monetary policy and its trends over the period of 2010-2020 have been estimated.

Money supply growth rate М3 as of the beginning of 2020 made up 1.13 as compared to the beginning of 2019, or 13%. The largest growth rate of the money in circulation over the period under research has been traced at the beginning of 2011 – 1.23 to the previous year, or 23%. It should be indicated that money supply growth was within the norm and did not cause any price destabilization, which, in its turn, did not pose a threat for the state’s financial security.

According to the NBU’s annual report for 2019 [Richnyi zvit NBU za 2019 rik], a considerable growth of cash М0 occurred in the cash circulation in Ukraine in 2019. The balance of cash in bank cash desks as of January 01, 2020 made up 40.7 bln. UAH. That is the maximum amount traced since the beginning of the monetary reform in 1996. Over 2019 the balance increased by 4.2 bln. UAH, or by 11.5 %, as compared to the beginning of the year.

The rate of economy monetization is a macroeconomic indicator characterizing the degree of economy provision with the money necessary for making payments as well as reflecting the provision of the production and consumption processes with the respective money supply [Mishchenko 2011: 211].

Economy monetization is related to actual economic and social processes taking place in the country, the value of the goods and services created in the economic system, velocity of money circulation, the value of demand for and supply of goods and money, the status of the commodity and financial markets. In case of excessively low monetization the country may expect stagnation of the stock exchange, commodity, and currency markets, long sales and payment crises, barters in commodity turnover and accumulation of insignificant scope of savings, and, as the result, low level of investment.
According to the date provided in Table 1, the threshold value of the monetization level is within 40-50%. We will analyze the dynamics of the given indicator over the period under research with due account of this level.

The level of monetization in the period of 2010-2020 changed depending on the condition of the economy. Thus, in 2010-2013 the indicator fluctuated within 52-55%, which slightly exceeded the threshold value. Such trends in the indicator values can be accounted for by the availability of macroeconomic imbalances in the economy of Ukraine, that arose under the effect of the global financial crisis [Vysotska, Horalko 2017]. Social and economic changes that occurred in the country in 2014 caused monetization level growth up to 62%, and in 2015 – up to 61%. In 2019-2020 the figure was reduced considerably and made 36%, which is less than the threshold value.

In general, over the period of 2010-2020 the growth of the consolidated money supply amounted to 951.0 bln. UAH, that is it increased almost threefold. As of the beginning of 2020, the money supply made 1,438.3 mln UAH, as of the beginning of 2010 – 487.3 mln. UAH, in spite of the fact that the money supply growth rate considerably outpaces the demand for it. There is an assumption that the growing rate of monetization leads to inflation processes. However, just the opposite can be proven by the example of the Ukrainian monetary system – the growth in the money supply did not affect the inflation rate regulated by the NBU via inflation targeting.

In the cross-section of the analysis of indicators calculated on the basis of money aggregates, an important indicator of the monetary system status and the state’s monetary policy is the share of cash in circulation, which is calculated as the ratio of M0 to M3 and is shown in percentage.

In general, the most efficient amount of cash in circulation is the volume not exceeding 10%. However, in most developed countries of the world there has recently been a trend towards the growth in the amount of cash in the monetary circulation of the national currency, definitely, at a smaller pace as compared with Ukraine.

As far as Ukraine’s money circulation is concerned, in this country cash circulation takes a considerable place in payments. Thus, in period from 2010 to 2020 the share of cash (M0 aggregate) varied from 27% to 32%, which means that one third of the money was circulating beyond banks and was not controlled by the banking system. A positive trend consisted in the reduction of the amount of cash over the period and its lowest value at the beginning of 2020 – 27%, as compared to 32% as of the beginning of 2010.

Important reasons for the high share of cash money in circulation is the striving of many economic agents to make payments in cash, financial illiteracy of residents, imperfect nature of banking technologies for cash-free payments with cards by residents in all inhabited settlements and in all retail trade or service
institutions, low level of trust of legal entities and natural persons in the banking system.

Let us indicate that high share of cash (more than 40%) testifies to the lack of trust in the banking system, to be more specific, to the availability of significant threats related to saving money through banks. Also, a considerable share of cash may cause shadowing of the economy, cause difficulties in the field of control exerted by the central bank over money aggregates and money supply in general.

At the same time, the high share of cash in circulation leads to a number of negative consequences for the monetary and economic system: the status of payments is made more complicated, credit capacity of banks goes down, the level of shadow economy goes up. This all creates direct threats to the monetary security, and finally – to economic security in general.

Thus, on the basis of the indicators calculated through money aggregates, we draw a conclusion about their most efficient values for the monetary field of Ukraine, absence of threats posed by them to the financial and economic security of the state, and that means that the NBU’s monetary policy has been efficient in this direction.

We consider money circulation dollarization to be the critical indicator for the assessment of the monetary security status, since high value of this indicator testifies to the dependence of the state’s economy on the fluctuations of the foreign currency exchange rate, in particular, the US dollar.

Dollarization is the economic phenomenon the essence of which lies in replacement of the national monetary unit with converted foreign currency as the result of inadequate performance of the functions of money by it. High level of the use of foreign currencies in the monetary circulation conceals a number of threats for the national economy, that are manifested in the incapacity of the national monetary unit to perform the functions of the general equivalent in the territory of its state and the only means of accumulation; intensification of the state’s economy dependency on the country which is the issuer of the foreign currency in the internal monetary market; dependence of the cost of hryvnia in the currency market on the amount of foreign money; increased shadowing of the economy; incapacity of the central bank to manage the monetary policy via establishing control over cash supply in foreign currency in circulation and the dynamics of foreign currency deposits [Vysotska, Horalko 2017].

Table 2 shows the estimated dynamics of the level of dollarization of the residents’ credits and deposits. In spite of the fact that 20% dollarization is considered to be an acceptable rate, this figure is much higher in the realia of the Ukrainian economy. The key factors causing dollarization are high inflation rate, national currency instability, currency exchange rate fluctuations, lack of residents’ trust in the national currency, unstable political and economic situation in the country. Due to the above preconditions, the level of credit and deposit
dollarization was the highest in 2014-2015: 55.8% and 49.4% under credits, and 45.3% and 46.26% – under deposits. It was those years in the recent decade that have been recognized to be the years of the most severe political and economic instability, when the trust in the national currency was extremely low, while inflation was extremely high, and the GDP decline was critical.

Currently, Ukraine is a country with ‘highly dollarized’ economy, according to the International Monetary Fund’s methodology: the dollarization rate by the share of deposits made in foreign currency in the M2 monetary aggregate exceeds 30% [Vysotska, Horalko 2017].

A negative outcome of the high dollarization level is the fact that the state is actually being transformed into the creditor of the foreign state’s economy (in particular, the USA). It is highly difficult for the central bank to maintain price, financial, and banking stability in the highly dollarized economy.

Besides that, the negative outcomes are aggravated by the fact that the state is losing a considerable share of the money it needs for servicing its external commitments, financing investment and economic growth in general.

In our opinion, the NBU’s monetary policy cannot be considered efficient as far as the economy dollarization rate is concerned. Obviously, the NBU has not used all the stabilization tools and levers to minimize this indicator which has been dangerously high over the whole period. However, on the other hand, the economy dollarization rate is also affected by the national economic policy of the Government of Ukraine, which needs to establish general favourable stable conditions for the life and activities of the population that would have an absolute trust in the national currency as well as would save and credit mainly in it.

To complete our analysis, let us also assess the indicator of the share of long-term credits in the overall scope of credits provided by banks to the state economy for a period exceeding 5 years.

According to the results obtained in Table 2, we come to the conclusion about the insufficiency of the long-term economy crediting over the period of 2010-2020. Only in 2010 the value of the estimated indicator made 31%, while in other years it was considerably lower than the threshold one. As of the early 2020, the share of long-term crediting was only 20%.

Thus, we consider it necessary for the NBU to activate the credit policy of banking institutions in relation to long-term crediting for the sake of intensifying the effect on the development and growth of the state economy, and also cooperation with the Government should be improved in this respect for the sake of developing a joint and realistic strategy of the state development.

Thus, having researched and analyzed the key indicators of the monetary security level we may draw a conclusion about the sufficient level of monetary policy efficiency from the point of view of achievement of the goals of the monetary and economic security of the state.
The threat to economic security as of the beginning of 2020 is posed by excessive dollarization of the economy and the insignificant share of long-term credits in the overall volume of credits provided by banks for the economy. That is why, for the sake of ensuring monetary security, the National Bank of Ukraine should adjust its monetary policy. However, in general, taking into account the positive dynamics of all statistical and estimation indicators for the recent years as well as skillful overcoming of the consequences of the 2014-2015 financial and economic crisis by the NBU, we may consider the NBU’s monetary policy efficient as for the current stage.

Monetary achievements of the NBU. It would also be expedient to focus on the NBU’s achievements over the recent years, mentioned in the Financial Sector Development Strategy until 2025. In particular, the regulator indicates that ‘the financial and banking systems are efficiently performing the functions of financial mediation. Ukraine has got a favourable business environment, in the conditions of low inflation economic growth is sustainable and of high quality. GDP growth, expanded crediting of the real sector of the economy, improved payment capacity of private consumers promote macrofinancial stability, capitalization of the banking system and the market of non-banking financial services is growing. The legal field for the development of the market of secondary credits, determination of the principles of managing liabilities under monetary commitments, mechanisms of working with the rights of claim, redemption of bad assets has been developed. The mechanism of securitization of financial and other assets has been introduced, and the mechanism for mortgage assets securitization has been improved. The scope of small and medium-sized business crediting have approached the average for the Central and Eastern Europe countries due to the cheapening of credit resources, improved activity and reporting transparency’ [Stratehiia rozvytku finansovoho sektoru Ukrainy do 2025 roku, 2019].

That all points to the activation of the NBU activities related to overcoming of the negative phenomena and processes in the financial sector, in particular, the banking system, since a considerable share of progress in the field is due to the efficient monetary policy of the NBU.

Also, the Strategy indicates that the ‘regulator has introduced regulation of new and modern directions FinTech – InsurTech, WealthTech and crediting platforms, crowd-funding regulation. Due to that current international trends related to Machine Learning and Artificial Intelligence technologies are represented and used directly in FinTech directions. The European Union’s standards related to directive PSD2, ISO20022 standard and instant payments have been introduced, this enabling to raise competitiveness in the financial market, to ensure expansion of the range of financial services. The concept of using e-hryvnia has been developed (CBDC – Central Bank Digital Currency) at the national level’ [Stratehiia rozvytku finansovoho sektoru Ukrainy do 2025 roku, 2019].
Thus, the monetary system of Ukraine at the current stage is being developed in the context of its integration into the global banking system, this testifying to its progressiveness and efficiency.

**Assessment of monetary threats.** We consider it to be expedient to conduct a further study of the monetary policy efficiency amidst monetary threats posed to economic security, that will enable to comprehensively and dynamically assess the effect of the monetary policy on economic security and draw a final conclusion on its efficiency.

Thus, the research conducted has enabled to outline four groups of monetary threats posed to economic security: monetary, banking, investment, and institutional.

*The group of institutional or organizational and legal threats* unites the threats developed in the NBU’s performance area and include the threats arising due to imperfect legislative regulation of the monetary field or interaction between institutions.

*The group of monetary threats* stands for the threats arising in the monetary system and being the indicators of direct NBU’s regulation, that have stopped being under control as the result of the effect of subjective and objective circumstances and conditions.

*The group of banking threats* arises in the activity of banking institutions and embraces negative indicators, phenomena, and processes that are not regulated by banks and that have activated the negative impact on the development of the national economy and economic security.

*The group of investment threats* is related to the movement of investment capital, both internal and external, leading to the inflow or outflow of quite an amount of investment resources into the national economy or from it.

Let us develop the assessment matrix for the identified monetary threats, where each threat will be assigned a certain number of points from 0 to 5, where 0 is the lowest level of hazard, while 5 points go to the highest critical level of threat. And we will rely upon the analytical study of the NBU’s statistical indicators which we performed above, on the assessment of estimate indicators and their dynamics over the period under study.

In order to explain the author’s methodology of assessing monetary threats posed to Ukraine’s economic security, let us develop the criteria of monetary threat assessment:

0-1 – low level of threats – the indicators over the reporting period showed positive growth (decline) dynamics and / or are within the standard (threshold) values;

2-3 – insignificant level of threats – the indicators over the reporting period showed a slight deviation from positive dynamics or a slightly negative trend;
4-5 – high (critical) level of threats – the indicators over the reporting period showed a clearly manifested negative trend and went beyond the standard (threshold) values.

At the same time, it should be noted that in order to get as reliable reflection of the monetary policy efficiency in terms of prevention and overcoming of the monetary threats posed to economic security as possible, let us develop several matrices of monetary threat assessment, that will embrace the period of 2010-2020. The matrix of assessing the monetary threats posed to the economic security of Ukraine as of the end of 2020 is presented in Table 3.

In this article the results obtained within the matrices for assessing the monetary threats posed to the economic security of Ukraine in 2010 and 2015 are provided only in a generalized way.

According to the established system of monetary threat assessment, in 2020 the most significant monetary threat was posed by the group of institutional threats containing a large subjective component, the so-called ‘human factor’. It is the transparency of the NBU’s activities, the level of professionalism in the management, coordination of the activities with the Government and frequent legislative changes that are the threats that may get stronger or weaker depending on the level of professionalism of the officials of monetary institutions. And it is in this group that we see the most significant threat in 2020.

The lowest score, according to the author’s assessment, – 1.63 – went to the group of monetary threats that, respectively, develops the lowest level of monetary threat. That is the group of threats subjected to direct regulatory activities of the NBU and which were successfully minimized in 2020, this pointing to the efficiency of the NBU’s monetary policy.

It should be indicated that according to the assessment criteria score, none of the outlined groups of threats in 2020 posed a high or critical level of threat for economic security. The average score for all the groups of threats was 2.25, which is identified as an insignificant level of threats, or absolutely acceptable.

Along with that, inside each group there are high-level threats assessed at 4 points. In particular, within the group of monetary threats this is excessive economy dollarization. Among banking threats these are the growing volume of bad debt, deficit of internal mid-term and long-term credit resources, insufficiency of long-term economy crediting. Within the group of investment threats these are considerable amount of money taken offshore. It is those threats that pose a high level of danger, and their dynamics is not characterized by any downward trend.

As far as assessment of the monetary threats posed to the economic security of Ukraine as of the end of 2010 is concerned, the average score in the four groups was 1.99, which is below the estimated average of 2020. This means that, according to the authors’ estimates, the level of monetary threats in 2010 was
Table 3. The matrix of assessment of the monetary threats posed to the economic security of Ukraine (2020)

<table>
<thead>
<tr>
<th>Monetary Threats</th>
<th>Banking Threats</th>
<th>Investment Threats</th>
<th>Institutional Threats</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price instability</td>
<td>Banking system instability</td>
<td>Considerable scope of money taken offshore</td>
<td>Low level of independence and transparency of the NBU’s activities</td>
<td>3</td>
</tr>
<tr>
<td>Deterioration of the money supply structure</td>
<td>Accounting rate growth</td>
<td>Rapid outflow of foreign capital, caused by the financial crisis</td>
<td>Inadequate management of the monetary system financial regulation</td>
<td>2</td>
</tr>
<tr>
<td>Rapid hryvnia exchange rate decrease</td>
<td>Excessive growth in the consumption and mortgage crediting</td>
<td>Considerable impact of the speculative foreign capital</td>
<td>Reinforcement of administrative pressure exerted on the monetary system financial regulation</td>
<td>2</td>
</tr>
<tr>
<td>Ungrounded national currency emission</td>
<td>Intensified dependence of the banking system on the state support</td>
<td>Non-correspondence of the crediting structure to the objectives of investment economy upgrading</td>
<td>Absence of realistic forecasts of macroeconomic indicators, which fact has a negative impact on the NBU’s activities</td>
<td>3</td>
</tr>
<tr>
<td>Money supply volume growth</td>
<td>Loss of trust of economic agents in the banking system</td>
<td>Insufficient volume of the banking system’s resources</td>
<td>Insufficient coordination of the actions taken by the Government and the NBU</td>
<td>3</td>
</tr>
<tr>
<td>Inflation rate growth</td>
<td>Insufficient volume of the banking system’s resources</td>
<td></td>
<td>Imperfect nature and frequent changes of the regulatory framework</td>
<td>3</td>
</tr>
<tr>
<td>Reduction of gold and foreign currency reserves of the state</td>
<td>Credit resource cost growth</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Excessive use of modern derivative financial tools</td>
<td>Reduced volume of residents’ savings and deposits.</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Rapid change of the currency exchange rate</td>
<td>Bad debt amount growth</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Excessive level of economy monetization</td>
<td>Deficit of internal mid-term and long-term credit resources</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Excessive economy dollarization</td>
<td>Insufficiency of long-term economy crediting</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Average group score</td>
<td>1.63</td>
<td>2.45</td>
<td>2.25</td>
<td>2.67</td>
</tr>
</tbody>
</table>

Source: own authors’ development.
lower than in 2020 and is determined as low, with insignificant deviation from the standard (threshold) values.

At the same time, in 2010 the highest level of threat was posed by excessive economy dollarization, which amounted to 40.31% for credits and 42.97% for deposits, which exceeds the threshold value almost twice.

A much worse situation could be traced in the level of monetary threats as of the end of 2015. The average score in all groups of threats amounted to 3.7, which is determined as high level of threats, with a clearly marked negative trend in the indicators over the reporting period, since the values of the indicators went beyond the standard (threshold) values.

The highest danger in 2015 was posed by the monetary threats (the average score of the group was 4), which developed under the effect of internal social and political instability and actually led to a short-term collapse of the whole economic system of the state: the annual inflation pace grew up to 143.3%; international reserves decreased to the critical scope of 6,419.6 mln. USD; the share of outstanding debt increased twice – reaching 13.5%; the exchange rate started growing rapidly from 15.768 UAH as of the beginning of 2015 up to 23.784 as of the end of the year, etc. All these events were simultaneous and dealt a heavy blow to the economic system of the state, undermining its economic security.

In 2015 the group of banking threats got the average score of 3.73, while the group of investment threats got the average score of 3.75, which fact points to a rather high threat posed by both groups to economic security.

In particular, the highest score in 2015 in these groups went to: banking system instability – the number of banks in 2015 went down to 117 from 180 in 2014, while their financial damages for the first time amounted to 52,966 mln. UAH; accounting rate growth – the average annual accounting rate of the NBU made up 23.75%, which became an anti-record over the period under research; rapid outflow of foreign capital caused by the financial crisis – foreign direct investment reduced over the year by 4,570.9 mln. USD, etc. This all led to the loss of trust of economic agents in the banking system and caused development of the insufficient volume of the banking system’s resources.

Let us also indicate that permanently high monetary threat is posed by low level of independence and transparency of the NBU’s activities, which is assessed at 3 points over the whole period, which means that this is a considerable threat.

We are of the opinion that supporting of transparency by banking institutions constitutes an essential element not just for passing adequate and balanced financial decisions, but for analyzing, predicting and planning sustainable social and economic development of the country.

In spite of the fact that over the recent years the NBU has increased transparency of its activities in the context of the communication policy: through launching publishing of the inflation report, introduction of changes into the
organizational and functional structure of the NBU, expansion of the range of communication channels, modernization of functional content and structure of the site of the official Internet representation of the monetary regulator, improvement of its communication with the state authorities, launching of a series of lectures conducted by the NBU’s administration, and others, the transparency indicator of the central bank made up 7.0 points in 2018-2019 out of 15. In the European countries this index is twice higher (the average value of the indicator is at least 10 points).

It can be stated that the National Bank of Ukraine uses communication channels for making information public for prospective users only by some 50%. That means that currently the intention to improve transparency and accountability of the NBU’s policy remains just an unfulfilled wish.

The dynamics of assessing monetary threats by the outlined groups over 2010-2020 is presented in Figure 1.

Thus, the highest level of monetary threats posed to the state’s economic security could be traced in 2015 – the year of the financial crisis caused by the unstable social and political situation in the state. In 2010 and 2020 the level of threats can be considered acceptable, the one that could be controlled and regulated by the NBU. This means that implementation of the NBU’s monetary policy was efficient, as confirmed both by the authors’ assessment points, and by the dynamics of the key indicators of the monetary field in the period under research.

At the same time, analysis of the efficiency of the monetary policy in Ukraine has proven that currently there are many drawbacks in it, viz.: excessive share of cash in the money circulation; insignificant volume of long-term crediting; high level of economy dollarization, considerable cost of credit resources along with simultaneous shortage of resources in the banking system, etc.

3. Conclusions

While carrying out its monetary policy the NBU should take into account the key factors leading to its reduced efficiency as well as take steps to minimize their negative effect, in particular:

– ensure reduced rate of dollarization in the structure of bank assets and liabilities, and hence, reduced dollarization of the economy in general;

– raise the efficiency of the interest rate policy through directing it at encouraging crediting of the real sector of the economy by banking institutions and for the sake of the most efficient management of the banking system liquidity;

– improve the mechanism of banking institutions refinance;
– ensure adequate information and communication policy of the NBU that must be directed at managing the expectations of economic entities via ongoing professional communication provided for by the central bank.

Thus, of importance in ensuring economic security of Ukraine at the current stage must be efficient monetary policy directed not that much at the financial, but rather production stabilization and modernization, structural transformation of industry. Only in that case will economic growth become a component of macroeconomic stabilization, while currently a restrictive nature of the monetary policy can be traced, its direction mainly at inflation minimization, and not at the economic growth needs (which results in reduced demand, unemployment growth, etc.).

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Efektywność polityki pieniężnej na Ukrainie w kontekście osiągania bezpieczeństwa finansowego


Słowa kluczowe: polityka pieniężna, bezpieczeństwo finansowe, bezpieczeństwo ekonomiczne, efektywność, wskaźniki, zagrożenia pieniężne